

REMARKS

Responsive to the Office Action mailed on July 9, 2008 in the above-referenced application, Applicant respectfully requests amendment of the above-identified application in the manner identified above and that the patent be granted in view of the arguments presented. No new matter has been added by this amendment.

Present Status of Application

Claims 3, 7, 22, 25 and 34-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshida et al (US 6,710,608, hereinafter "Yoshida"). Claims 2, 5 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshida in view of Farworth (US 6,362,642, hereinafter "Farworth"). Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshida in view of Di Stefano (US 6,426,638, hereinafter "Di Stefano").

In this paper, claim 7 is amended. New claims 38 and 39 are added. Support for the amendments and new claims can be found, for example, paragraphs 0016, 0051 and 0052 of the specification as originally filed. Thus, on entry of this amendment, claims 3, 7, 22, 25 and 34-39 remain in the application.

Reconsideration of this application is respectfully requested in light of the following remarks.

Rejections Under 35 U.S.C. 103(a)

Claims 3, 7, 22, 25 and 34-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshida. Claims 2, 5 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshida in view of Farworth. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshida in view of Di Stefano. Applicant respectfully traverses the rejections for the reasons as follow.

To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). "All words in a claim must be considered in judging the patentability of that claim against the prior art." *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970).

As amended, claim 7 recites a probe module for testing an LCD panel having a plurality of test points comprising:

a probe base having a plurality of conductive metal traces;

a plurality of completely exposed probe pins attached to the probe base, each of the probe pins comprising an elongate body, wherein at least part of the elongated body is bonded to at least one of the plurality of conductive metal traces of the probe base;

a flexible circuit interconnect device for connecting the plurality of probe pins to an inspection apparatus;

a flexible compression arm attached to a probe base and configured to engage the plurality of probe pins; and

at least one adjustment element provided on the probe base ***configured to adjust a pressure of the flexible compression arm against the plurality of probe pins during testing of the LCD panel so as to adjust a contact angle of the probe pins with respect to the test points.***

In the rejections, the Examiner identifies the combination of pinching body 110E and elastic film 400E as the alleged “flexible compression arm” of claim 7. Bolt 130E is identified as the alleged “adjustment element” of the claim. The Examiner further asserts:

Yoshida is silent about the adjusting of the contact angle of the probe pins.

Note that, the bolt 130E in combination with 112E and the elastic film 400E as shown in Figs. 20-24 would press on the end portion of contact pins 3aE bent in the S, S1 and S2 positions (as shown in Figs. 20-24) for good contact to the terminals of DUT (col. 25, lines 30-40). Therefore, it would have been obvious to a person having an ordinary skill in the art at the time of the invention was made to recognize that when the compression arm is pressed against the plurality of the probes by the tightening of the adjustment

element (130E), the contact angle of the probe pins is accordingly changed in positions, as shown in Figs. 20-24) for good contact to the terminals of DUT (col. 25, lines 30-40).

Applicant first submits that bolt 130E is not an “adjustment element” as recited in claim 7. In particular, bolt 130E is used to assemble pinching body 110E, contact probe 200E, top clamp 111E, and bottom clamp 115E. In this regard, Yoshida uses language such as “bolting on” and “fixed by bolts” in connection with the bolts. Thus, the bolts are used to rigidly fix the elements of Yoshida’s probe together (failure to do so would result in loosened electrical connections and negatively impact the structural integrity of the probe). Given its broadest reasonable interpretation in light of the specification, the meaning of “adjustment” comports with its plain meaning, i.e., to “alter or move (something) slightly in order to achieve the desired fit, appearance, or result.” *New Oxford American Dictionary, 2nd Edition*. A bolt configured for fixing one element to another simply does not fit this meaning.

Furthermore, amended claim 7 recites at least one adjustment element provided on the probe base configured to adjust the pressure of the flexible compression arm against the plurality of probe pins during testing of the LCD panel so as to adjust a contact angle of the probe pins with respect to the test points. However, in the probes shown in Figs. 20-24 of Yoshida, bolt 130E is not configured to adjust the pressure of elastic film 400E (i.e., the alleged “flexible compression arm”) against contact pins 3aE (i.e., the alleged “plurality of probe pins”) so as to adjust a contact angle of contact pins 3aE with respect to terminals 90 (i.e., the “test points”) during testing of the LCD panel.¹ In particular, elastic film 400E is fixed in place by bolt 130E during the assembly of the probe. Once fixed in place, further tightening of bolt 130E would not adjust the pressure of elastic film 400E against contact pins 3aE.

¹ There is nothing inherently wrong with defining some part of an invention in functional terms. Functional language does not, in and of itself, render a claim improper. *In re Swinehart*, 439 F.2d 210, 169 USPQ 226 (CCPA 1971). A functional limitation must be evaluated and considered, just like any other limitation of the claim, for what it fairly conveys to a person of ordinary skill in the pertinent art in the context in which it is used. A functional limitation is often used in association with an element, ingredient, or step of a process to define a particular capability or purpose that is served by the recited element, ingredient or step. MPEP 2173.05(g).

Applicant further submits that there is no motivation to modify or use bolt 130E in this manner. As noted above, bolt 130E is used to rigidly fix the elements of Yoshida's probe together. Failure to do so would result in loosened electrical connections and negatively impact the structural integrity of the probe. Furthermore, Yoshida teaches that elastic film 400E and contact pins 3aE are arranged to achieve "a uniform contact pressure" at the front ends of contact pins 3aE no matter the condition of the pin (namely, straight S, or bent S1 and S2). Furthermore, Yoshida expressly discloses that "the contact pressure on the pins 3aE can be adjusted by how far the elastic film 400E projects over the contact pins 3aE." Col. 25, lines 40-53. It is evident that bolt 130E is not configured to **adjust** the pressure of 400E on contact pins 3aE during testing of the LCD.

For at least the reasons described above, it is Applicant's belief that the cited reference fails to teach or suggest all the limitations of claim 7. Applicant therefore respectfully requests that the rejection of claim 7 be withdrawn and the claim passed to issue. Insofar as claims 3, 22, 25 and 34-37 depend from claim 7, and therefore incorporate all of the limitations of claim 7, it is Applicant's belief that these claims are also in condition for allowance.

New Claim 38

New claim 38 is believed to be allowable at least by virtue of its dependency from claim 7. In addition, the claim is believed to be allowable for the following alternate and independent reasons.

New claim 38 recites that the adjustment element is a micro-adjustable adjustment screw. Bolt 130E is not an adjustment screw. Furthermore, there is no teaching or suggestion that bolt 130E is micro-adjustable. In addition, there would be no motivation to replace bolt 130E, which fixes elements of Yoshida's probe together, with a micro-adjustable adjustment screw.

New Claim 39

New claim 39 recites a probe module for testing an LCD panel having a plurality of test points comprising:

a probe base having a plurality of conductive metal traces;

a plurality of completely exposed probe pins attached to the probe base, each of the probe pins comprising an elongate body, wherein at least part of the elongated body is bonded to at least one of the plurality of conductive metal traces of the probe base;

a flexible circuit interconnect device for connecting the plurality of probe pins to an inspection apparatus;

a flexible compression arm attached to a probe base and configured to engage the plurality of probe pins; and

at least one adjustment element provided on the probe base ***for adjustably increasing and decreasing a pressure of the flexible compression arm on the plurality of probe pins during testing of the LCD panel so as to adjust a pressure of the probe pins on the test points.***

The features of new claim 39 find support at least in paragraphs 0016, 0051 and 0052 of the specification.

As noted above in connection with claim 7, bolt 130E bolt 130E is used to rigidly fix the elements of Yoshida's probe together. It does not adjustably increase or decrease a pressure of the flexible compression arm on the plurality of probe pins during testing of the LCD panel so as to adjust a pressure of the probe pins on the test points. To the contrary, Yoshida expressly teaches that elastic film 400E and contact pins 3aE are arranged to achieve "a uniform contact pressure" at the front ends of contact pins 3aE no matter the condition of the pin (namely, straight S, or bent S1 and S2). Col. 3, line 45.

Conclusion

The Applicant believes that the application is now in condition for allowance and respectfully requests so. The Commissioner is authorized to charge any additional fees that may be required or credit overpayment to Deposit Account No. **502447**.

Appl. No. 10/689,262
Examiner: NGUYEN, TUNG X, Art Unit 2829
In response to the Office Action dated July 9, 2008

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Respectfully submitted,

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